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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,730	03/20/2004	Seng-Tiong Ho	5300-00002	2729
26753	7590	01/31/2007	EXAMINER	
ANDRUS, SCEALES, STARKE & SAWALL, LLP 100 EAST WISCONSIN AVENUE, SUITE 1100 MILWAUKEE, WI 53202			DETSCHEL, MARISSA	
		ART UNIT	PAPER NUMBER	
		2877		

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/31/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/708,730	HO ET AL.	
	Examiner Marissa J. Detschel	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 09 November 2006.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-8 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 1-7 is/are allowed.  
 6) Claim(s) 8 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Response to Amendment***

The amendment filed on November 9, 2006, has been entered. In view of Applicant's amendments to the claims, the previous rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of 35 U.S.C. 101.

### ***Claim Objections***

Claim 8 is objected to because of the following informalities:

- In part a, line 2 of this claim, the limitation "the spectrometer" is included in this line, and there is insufficient antecedent basis for this. The Examiner suggests changing this to "a spectrometer"
- In part c, line 1 of this claim, the phrase "curve grating" should read "curved grating"
- In part c.ii., line 1, the phrase "the position" should read "the positions"

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 8, In part c.ii., the variables  $d_1(\theta_1, S_1, X_{i-1})$  and  $d_2(\theta_2, S_2, X_{i-1})$  are not defined.

Due to this, mathematical expression disclosed for determining the positions of other grooves is not completely defined. What are these variables?

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 8 is rejected under 35 U.S.C. 101 because it is directed towards non-statutory subject matter.

The claim is directed to a judicial exception as being drawn to an abstract idea; as such, the claims must either have a physical transformation and/or a useful, concrete, and tangible result. The claim fails to include transformation from one physical state to another. The claim appears to be useful and concrete, but there does not appear to be a tangible result claimed.

See OG Notices: 22 November 2005, "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility".

Merely "using a compact curved grating in order to analyze the spectra composition..." would not appear to be sufficient to constitute a tangible result, since the outcome of the "using a compact curved grating in order to analyze the spectra composition..." step has not been used in a disclosed practical application nor made available in such a manner that its usefulness in a disclosed practical application can be realized. The steps of using the compact curved grating further involve more steps that do not appear to be sufficient to constitute a tangible result, namely "calculating initial groove spacing..." and "determining the positions of other grooves..." According to the applicant's disclosure, this calculating the initial groove spacing is done using equation 1. The determining the positions of other grooves utilizes equation 2. These are mathematical relations, and, as such, the steps of calculating the initial groove spacing a determining the positions of the other grooves are mathematical results and are not tangible.

Furthermore, Part b. *Practical Application the Produces a Useful, Concrete, and Tangible Result* under Section IV *Determine Whether the Claimed Invention Complies with the Subject Matter Eligibility Requirement* of 35 U.S.C. Sec. 101 sentence 3 in the OG Notice from 22 November 2005 states 'In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete, but rather that the final result achieved by the claimed invention is "useful, tangible, and concrete."

***Allowable Subject Matter***

Claims 1-7 are allowed in view of the prior art.

The following is a statement of reasons for the indication of allowable subject matter:

As to claim 1, the prior art of record, taken alone or in combination, fails to disclose or render obvious a spectrometer suitable for analyzing a spectra of an optical beam comprising a curved grating wherein an arc length of each of the grooves of the grating is the same, in combination with the rest of the limitations of claim 1.

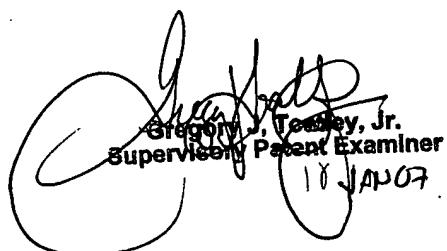
As to claim 7, the prior art of record, taken alone or in combination, fails to disclose or render obvious a curved grating wherein an arc length of each of the grooves of the grating is the same, in combination with the rest of the limitations of claim 7.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa J. Detschel whose telephone number is 571-272-2716. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on 571-272-2059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

January 12, 2007  
MJD



Gregory J. Teasley, Jr.  
Supervisory Patent Examiner  
18 JAN 07